

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Madhusudhan Rangarajan, Paul D. Stultz
Assignee: Dell Products L.P.
Title: System and Method for Manufacture of Information Handling Systems
with Selective Option ROM Executions
Serial No.: 10/713,930 Filing Date: November 14, 2003
Examiner: Ji H Bae Group Art Unit: 2115
Docket No.: DC-05572 Customer No.: 33436

Austin, Texas
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COMMISSIONER FOR PATENTS
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RESPONSE TO NON-FINAL OFFICE ACTION

Dear Sir:

This paper is responsive to the Office action dated March 22, 2006 having a shortened statutory period expiring June 22, 2006. Further examination and reconsideration are respectfully requested in view of the amendments and remarks set forth below.

AMENDMENTS

In the Claims

1. (Original) A system for managing manufacture of an information handling system, the system comprising:
 - a deployment module operable to determine boot commands during manufacture of an information handling system;
 - an Option ROM selector module interfaced with the deployment module and operable to identify one or more Option ROMs to disable in the performance of at least an identified one of the boot commands; and
 - an Option ROM boot execution controller associated with the information handling system and interfaced with the Option ROM selector module, the Option ROM boot execution controller operable to disable Option ROMs identified by the Option ROM selector module in the identified boot command.
2. (Original) The system of Claim 1 wherein the Option ROM selector module disables all Option ROMS in a selected boot command.
3. (**Currently Amended**) The system of Claim 2 wherein the selected boot command comprises a boot associated with flashing of a BIOS of the information handling system **BIOS**.
4. (Original) The system of Claim 1 wherein the Option ROM selector module disables all Option ROMs except Option ROMs associated with boot devices that boot the information handling system and installation devices that perform installation functions after the boot command.
5. (**Currently Amended**) The system of Claim 4 wherein at least one of the boot devices comprises a network interface card operable to perform a PXE boot from a network location.

6. (Currently Amended) The system of Claim 4 wherein at least one of the boot devices comprises a hard disc drive.

7. (Original) The system of Claim 1 wherein the Option ROM boot execution controller comprises a firmware module on a BIOS of the information handling system, and wherein the Option ROM execution controller is further operable to disable the loading of Option ROM code by the BIOS from the one or more devices associated with the one or more disabled Option ROMs.

8. (Original) The system of Claim 7 wherein the Option ROM selector module communicates Option ROMs identified as disabled as SMBIOS tokens.

9. (Original) A method for manufacturing information handling systems with selective boots of Option ROMs, the method comprising:

preparing a boot of the information handling system, the boot associated with a manufacturing function;
identifying Option ROM devices of the information handling system;
identifying any Option ROM devices associated with the boot and the manufacturing function;
enabling the Option ROM devices associated with the boot and the manufacturing function and disabling the other option ROM devices; and
executing the boot to load the Option ROMs associated with the enable Option ROM devices.

10. (Original) The method of Claim 9 wherein the manufacturing function comprises flashing a BIOS of the information handling system and wherein no Option ROM devices are identified as associated with the boot and the manufacturing function.

11. (Original) The method of Claim 9 wherein the boot comprises a PXE boot and the Option ROM device comprises a network interface card.

12. (Original) The method of Claim 11 wherein the function comprises deploying software to the information handling system hard disc drive and the Option ROM device further comprise the hard disc drive.

13. (Original) The method of Claim 9 wherein a disabled Option ROM device comprises a RAID device.

14. (Original) The method of Claim 9 wherein a disabled Option ROM device comprises a PCI card.

15. (Original) The method of Claim 9 wherein a disabled Option ROM device comprises a SCSI device.

16. (Original) An information handling system comprising:
plural processing components operable to process information, the processing components assembled to accept applications from a network location, the applications deployed with plural boots of the information handling system, selected of the processing components storing Option ROM code for execution at boot of the information handling system; and
an Option ROM boot execution controller interfaced with the processing components and operable to disable execution of selected Option ROM code in one or more application deployment boots.

17. (Original) The information handling system of Claim 16 wherein the plural processing components comprise a BIOS, the Option ROM boot execution controller disabling all Option ROM code in an application deployment boot operable to flash the BIOS.

18. (Original) The information handling system of Claim 16 wherein the plural processing components comprise a network interface card and a RAID card, the Option ROM boot execution controller disabling Option ROM associated with the RAID card, the information handling system booting to execute Option ROM associated with the network interface card in support of a PXE boot to a network location.

19. (Currently Amended) The information handling system of Claim 16 wherein the plural processing components comprise a hard disc drive and a RAID card, the Option ROM boot execution controller disabling Option ROM associated with the RAID card, the information handling system booting to execute Option ROM associated with the hard disc drive to run a deployment application stored on the hard disc drive.

20. (Currently Amended) The information handling system of Claim 16 wherein the plural processing components comprise a network interface card and a hard disc drive, the Option ROM boot execution controller disabling Option ROM associated with the hard disc drive, the information handling system booting to execute Option ROM associated with the network interface card in support of a PXE boot to a network location.

REMARKS

Pending Claims 1-20 of the present application stand rejected. Claims 1 – 8 and 16 - 20 stand rejected under 35 U.S.C. § 112, second paragraph and under 35 U.S.C. § 101. Claims 1 - 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable as obvious over U.S. Publication No. 2002/0108033 A1 issued to Kroening, in view of U.S. Patent No. 5,974,546 issued to Anderson. Applicants have amended Claims 3, 5-7 and 19-20 to address the informalities raised by the Examiner. Applicants respectfully traverse the rejections under Sections 101 and 103 and request reconsideration and full allowance of all pending claims.

The Examiner rejected Claims 1-8 and 16-20 under Section 101 because these claims recite the term “operable.” The Examiner’s rejections contradict the Patent Office’s standing policy to allow recitation of elements operable to perform defined functions. Applicants’ search of the Patent Office’s electronic database identified 143,069 patents that have issued since 1976 that recite the term “operable” in at least one claim. Applicants respectfully request that the Examiner state legal precedent to support this rejection or withdraw the rejections under Section 101.

The Examiner admits that Kroening fails to disclose an Option ROM selector or an Option ROM boot execution controller as recited by Claims 1 and 16 but states that one of skill in the art would be motivated to combine Anderson with Kroening to disclose the recited systems. The motivation state by the Examiner is that “failures during the reboot sequences of Kroening would cause disruption of the manufacturing process” so that combining the teachings of Anderson would “determine the cause of such failures and eliminate them.”

Applicants respectfully traverse the rejections under Section 103 because no motivation exists to combine the elements of Kroening and Anderson as suggested by the Examiner. Kroening discloses reducing boot times by use of a hibernation state file to boot a personal computer. Reduced boot times of Kroening help reduce manufacture times for the personal computer. Anderson discloses increasing the probability of a successful boot after a boot failure

by identifying the cause of the failure. No teaching, suggestion or motivation exists in Kroening or Anderson to address boot times related to Option ROM execution. If, as the Examiner suggests, Anderson were combined with Kroening to detection Option ROM failures, this would increase boot times, whether or not a failure occurs, not decrease boot times as suggested by the Examiner. Kroening addresses configuration of personal computers that operate correctly while Anderson addresses trouble shooting of personal computers that fail, prior art areas that are too unrelated to combine without a specific reference in at least one of the references. Accordingly, Applicants respectfully request that the Examiner withdraw the rejections of Claims 1-20 under Section 103 and issue an allowance without further delay.

CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being electronically submitted to the , Commissioner for Patents on June 19, 2006.

/Robert W. Holland/

Attorney for Applicant(s)

Respectfully submitted,

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